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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/941,118	08/28/2001	Christopher J. Bradford	IN-5518	6528

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BASF CORPORATION
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EXAMINER

BERMAN, SUSAN W

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 08/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/941,118

Applicant(s)

BRADFORD ET AL.

Examiner

Susan W Berman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 20-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-30 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 12, 7
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Election/Restrictions

A copy of the original restriction requirement wherein applicant elected the invention of Group I, claims 1-19 is attached hereto.

Response to Amendments and Arguments

The rejections of claims under 35 U.S.C. 112, second paragraph, are withdrawn in response to Amendment B. See paper number 11, pages 7-10.

Applicant argues that Lahrman et al disclose two separate coating compositions, one of which is radiation cured and the other of which is heat cured while the instantly claimed invention is a single coating composition comprising radiation curable and heat curable components. Applicant also argues that Lahrman et al do not recognize the problem to be solved by the instantly claimed composition. These arguments are not persuasive for the following reasons. Lahrman et al clearly disclose that the radiation curable compositions comprising (meth)acrylate-functional prepolymers or oligomers, photoinitiators, photosensitizers, thermally activatable free-radical initiators and binders. The radiation curable binders in the disclosed compositions can contain further functional groups accessible to chemical crosslinking (applicant's a1, optionally including a12) and external crosslinking agents can be added. Additionally, Lahrman et al teach that binders not susceptible to radiation curing and providing a non-radiation-induced curing reaction through functional groups, such as hydroxyl, oxirane or isocyanate, may also be added (applicant's a2). Lahrman et al specifically mention an OH-functional binder and a polyisocyanate curing agent to be added to the radiation curable lacquer to provide curing by two combined curing mechanisms (column 6, line 65, to column 7, line 11).

Terminal Disclaimer

The terminal disclaimer filed on 05-06-2003 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of any Patent granted on

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copending Application No. 09/940748, No. 09/941283 or No. 09/941295 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lahrman et al (5,425,970) teach that the radiation curable binders in the disclosed compositions can contain further functional groups accessible to chemical crosslinking and that external crosslinking agents can be added. Binders not susceptible to radiation curing and providing a non-radiation-induced curing reaction through functional groups, such as hydroxyl, oxirane or isocyanate, may also be added. See column 5, line 4, to column 7, line 11. Lahrman et al disclose, in Example 6, a composition comprising a urethane acrylate containing hydroxyl functional groups corresponding to applicant's component (a1), acrylate-functional monomers and a polyisocyanate curing agent (corresponding to applicant's component (a3)) that is irradiated and then heated to provide a high gloss surface. Lahrman et al teach the epoxy (meth)acrylate prepolymers having thermally curable functional groups should contain no aromatic moieties, but do not mention whether the other kinds of prepolymers can or cannot contain aromatic moieties; however, aromatic-containing binders are not suggested or employed in the examples (column 5, lines 12-18).

Lahrman et al teach compositions that may comprise components corresponding to each of (a1), (a2) and (a3) set forth in instant claim 1. Epoxy(meth)acrylate prepolymers containing no aromatic structures that can optionally contain thermally curable functional groups are taught. Example 6 clearly shows a composition comprising a radiation curable urethane acrylate having hydroxyl functional groups

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in combination with a polyisocyanate and dual cure of the composition. Lahrman et al do not require employing a radiation curable prepolymer containing further isocyanate-reactive functional groups or selecting a polyisocyanate as the external crosslinking agent or including a non-radiation curable binder having functional groups reactive with the isocyanate groups. However, It would have been obvious to one skilled in the art at the time of the invention to provide a composition comprising components corresponding to instantly claimed (a1) and (a3) selected from the prepolymers, binders and crosslinking agents taught by Lahrman et al because such a composition is taught in Example 6. It would have been obvious to one skilled in the art at the time of the invention to include a non-radiation curable binder containing functional groups reactive with a polyisocyanate, as taught by Lahrman et al in column 6, lines 43, to column 7, line 5, of the disclosure because a polyisocyanate is used as crosslinking agent in Example 6. One of ordinary skill in the art at the time of the invention would have been motivated by the teaching of Lahrman et al to provide a composition curable by radiation and heat to provide an initial gel and avoid sagging on lacquer coated vertical surfaces or to allow flash off of solvents, as taught in column 7, line 44, to column 8, line 34. With respect to claims 14-18, Lahrman et al do not teach the instantly claimed ratio of NCO groups to isocyanate reactive groups. However, It would have been obvious to one skilled in the art at the time of the invention to determine the ratio required in order to obtain the extent of crosslinking desired for a particular application because chemical crosslinking of isocyanate groups and isocyanate reactive groups is well known in the art. With respect to claims 7-10, Lahrman et al do not mention the polydispersity of the thermally curable component; however, the polydispersities of the thermally curable components taught would be expected to be within the ranges set forth in the instant claims, in the absence of evidence to the contrary.

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Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W Berman whose telephone number is 703 308 0040. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 703 308 2462.

The fax phone numbers for the organization where this application or proceeding is assigned are 703 872 9310 for regular communications and 703 872 9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0661.



Susan W Berman
Primary Examiner
Art Unit 1711

SB
August 11, 2003

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-19 drawn to a coating composition, classified in class 525, subclass
 - II. Claims 20-29 drawn to a method of coating a substrate, classified in class 427, subclass 407.1.
 - III. Claim 30 drawn to an article, classified in class 428, subclass 411.1.

Distinctness

The inventions are distinct, each from the other because:

2. Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the process for using the product as claimed can be practiced with another materially different product such as composition of inventions I but comprising a reinforcing filler.
3. Inventions I and III are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as self-supporting molded article and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious

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variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

4. Inventions II and III are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the process as claimed can be used to make other and materially different product such as a substrate coated from a composition different from a composition of claim 1, e.g., a composition of claim 1 but further comprising a reinforcing filler.
5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
6. During a telephone conversation with Mary E. Golota on October 4, 2002 a provisional election was made with traverse to prosecute the invention of Group I, claim 1-19. Affirmation of this election must be made by applicant in replying to this Office action. Claims 20-30 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.
7. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).
8. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently

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named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Conclusion


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is (703) 605-1171. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (703) 308-2333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Elena Tsoy
Examiner
Art Unit 1762

October 4, 2002



SUSAN W. BERMAN
PRIMARY EXAMINER
GROUP 1500